Nature Schools: The Perceived Impact of Non-Traditional Education on Success

An Honors Thesis (HONR 499)

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Abstract

The topic of this research paper is the world of nature based educational institutions and the impact they have on their students and teachers, as well as the feasibility of making them a more common occurrence in America. This paper explores the beginnings of using nature to amplify education, the theorists who use research to support the need for such education, the current working practices, the impact those practices have had, and the best route for creating more nature-based schools. Nature-based education is important because it would significantly improve the way our traditional education system currently treats both students and teachers. Students spend less time on screens and in classrooms, they foster more creativity, they are more independent and develop better critical thinking skills. Teachers have less judgement placed on them based on testing, have more freedom when planning and teaching lessons, and receive a lot of the same benefits the students do in regard to screen time and exposure to nature. Nature programs in the United Kingdom allowed for teachers to be their own boss, for students to find relief from the everyday pressures of the classroom and provided more time for adults and students to collaboratively plan their explorations. This paper looks for a way to provide these opportunities to American schools and programs.

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Process Analysis Statement

I first began my interest in nature schools my junior year of university while taking an honors course called Sustainability in Science Fiction. We read and watched classic and modern science fiction books and movies then discussed the plausibility of the scientific currents in the works. My professor was a Landscape Architect and he brought in one of his colleagues to lead a discussion one day on the work she was doing in her own back yard. Her name was Jody Rosenblatt and she was the Principal Investigator for two projects that highly interested me and my desire to break through the confines of traditional education. The projects are the Ball Brother Foundation and the Apple Tree Back Yard/Forest Kindergarten Project. They evaluate the effectiveness and utilization of forest and nature play facilities and address children's attention spans and task engagement. The second project builds upon the first by taking the data they gathered and then constructing learning landscapes for the Indiana Early Childhood Education program. Jody asked each of us what our majors were and when I mentioned education, she asked to know my thoughts on her work. I was ecstatic to learn about education like this and left class that day considering it for my future. I did not plan on writing my thesis about it at the time, but it was certainly a new area of my profession that I had not thought about before and would eventually make the perfect topic.

When it came time to decide on my official topic I wrestled between writing about education in urban low-income environments or nature schools. I ultimately decided that nature schools had so much more for me to learn about and were a brand new adventure. I noticed while going through the honors guide and talking with my classmates that urban low-incomes environments already have a lot of research behind them and that it would be something expected of me to pursue. Nature education has much less exposure and it would be an

opportunity for me to reconnect to my own childhood and explore my relationship with the outdoors. I wanted to follow this line of thinking not only for the future of education as I have chosen to be a teacher, but for my own personal experience within our public school system.

As I entered my latter years of education and began learning about the system I grew up in, I realized how stressful and controlling a lot of the structures put in place are. I myself was what teachers like to call a "model student," masking the neurotic, stressed product of the traditional public school education system. When I entered university, I realized how much more relaxed I could've been and how much more fun I should've been having. People who tried way less than me were still in the same spot as I was. I decided I wanted to find a different way to educate kids, one that didn't put so much pressure on them and catered more to real-world application than teaching to the test. Junior year when Jody Rosenblatt guest lectured in my class, I found my answer.

When I decided on nature education, I began by looking up articles and journals relating to nature schools. I found the German Waldkindergartens and the popularity of the idea throughout western Europe. Luckily, I was planning on studying abroad in the U.K. that summer. I originally wanted to be able to interview and tour various kinds of nature-based schools, but this required IRB approval. Unfortunately, I underestimated the amount of work the approval process would be and was not able to get full permission to interview people in time for my trip to England. However, while in England my advisor and I were able to visit some forest school programs just as a part of the trip we were taking. I visited Seabridge Primary School where they have a forest school program built within the regular school day. I was able to speak to some of the Year Six rangers about what they liked about and learned through the program, as well as with the director and creator regarding funding, support and daily operations. In addition, we

were visited on our university campus by a traveling forest school program. With this interaction, I was able to learn about the founder's reasons for creating the program, as well as participate in some of the activities that she would typically do with children. Lastly, we visited a rural farm in England where the owners took us on a tour of their acres and again allowed us to experience some of the tasks they do with children when they visit. I had a great conversation with one of the owners who used to be an educator, about some of the theorists and authors she read to inform her activities. While I could not officially record and use these interactions, the information and experiences were still extremely helpful and have influenced my branches of research and background knowledge.

In Fall 2019, I was back on campus and planned to visit nature schools within the area for more first hand experiences. I had found a school in Indianapolis called the Orchard School, a private school focused on nature and STEM learning. In addition, the Apple Tree School in Muncie was a type of nature program that I had learned of through my teacher's college advisor. I began this journey expecting to have several in-person experiences to apply to my research, but I was never able to visit another forest program after my summer in England. I learned that the over-achiever in me was still there and I neglected my thesis for most of fall semester. Luckily, my advisor now knew a little about how I worked and would schedule meetings with me where we at least got an outline done and the main research questions down. Having this clear direction come spring really helped me in organizing my paper as I began writing.

Spring 2020 involved student teaching in Indianapolis at Greenbriar Elementary School. I was living alone and had one focused responsibility now. While I knew that student teaching was going to take up a lot of my time and require a lot of hard work, I also knew that I no longer had any other extra-curriculars or outside responsibilities. This resulted in more time to work on my

thesis. I ordered the book that I saw most referenced in all of my light researching that I had already done, Richard Louv's *Last Child in the Woods* (2006). I began reading the book and marking up the text while writing down the information that backed up the need for nature education in the theories section of my paper. I continued this as I added on more general information from various websites for the introduction, working from the beginning of something to the end has always made sense in my head rather than skipping around. I added information I found about early practices like the waldkindergartens that I learned about from Jody Rosenblatt and some earlier writings supporting this idea from people like Jean-Jacques Rosseau and John Dewey. I had read their papers already in my educational foundations class and knew they would fit well in my paper. Next, I looked at the impact on success, this section was difficult because not much research has been done on these kinds of schools. I used a lot of the knowledge I got from my talks with the nature school kids from Seabridge to inform how I was going to look for support. Lastly, I knew that theses usually end with something new being presented, so I wanted to explore some ways that more of these schools could be built. I realized that because of governmental regulations and expectations, traditional public schools couldn't be turned into the kind of free-form school that is necessary, so I explored the options of charter and private schools. In addition, to make them more popular, they need to cater to a wider variety of students. I have a background in Special Education and address this in my feasibility section. The importance of this change is also addressed here, it strikes a similar chord to my own story of public school conformity.

The final writing phases of my paper were interrupted by a rather life-altering situation that we are all facing, the COVID-19 Pandemic. Exactly midway through my student teaching and writing of my thesis, I was informed that I would no longer be completing my student

teaching and I was to go home for the remainder of the school year. I was not required to complete my edTPA final project and could not finish my Pearson tests. I was suddenly granted all this extra time to complete my thesis; yet I was devastated by the way my senior year of college was ending. After sixteen years of education and trying so hard to succeed, I wasn't able to celebrate senior week with my sorority, or ring the bell after turning in my paper, or even walk across a graduation stage. I took at least a week off from any kind of academic rigor or work.

While being in quarantine first sapped a lot of my drive to complete my college work, it also revived it after a time. I began noticing the innate need people had to be outdoors and how most of us take it for granted every day. The kind of philosophies that the researchers and authors I was citing began showing itself the further in we got. I felt better on the days we had warm weather and sunshine, I noticed that whenever my mom looked up from her work, she instinctively looked out the windows; people were actually aching just to go on walks. The idea that nature is healing and can battle symptoms of anxiety, depression, and stagnation is being proved right now during this unprecedented time. This helped renew my interest in my thesis and helped me get back to my work. I've been finishing up with a new section on the current state of nature education in America and will wrap up my paper with why this change in education is important.

In addition to my thesis helping me through and being relevant during this final phase of my senior year, it also aids me going into the next phase of my life. I am very afraid that I will enter the traditional world of education and be unsatisfied with my decisions. However, with the discovery of nature education and the background that this paper provides me, I am hoping that I am a prime candidate for a teaching position at a nature school. Through my research I have found several schools near me that are nature-based institutions and I have even applied to one

that really encompasses all that I've imagined. Even if I don't get a position at one of these schools, I will be sure to use what I've learned, and go further into the practical application of the theories I read about to use them in traditional classrooms. Whether or not I make it in the official world of nature education does not have to stop me from practicing what I preach in this thesis.

Nature Schools: The Perceived Impact of Non-Traditional Education on Success

There are many ways to define "nature schools". One simple way is to call them non-traditional education, another is to classify and then construe each branch as it is brought forward. The North American Association for Environmental Education (NAAEE) defines nature-based education as,

> tak[ing] an immersive approach, putting nature at the heart of the program … it is a setting for the program and an object of study … the care and protection of nature and the environment are regarded as a key outcome of the program, along with a healthy child development. (2019)

Most of these schools are held outdoors every day for most of the day, year round. Their philosophy and teaching styles are student-centric meaning the inquiries of the children lead their learning, not the planned curriculum of the educators. The student-centric approach is becoming more popular in traditional classrooms today as well; however, it has more room to expand in the nature school setting. Often, the focus on the natural stays within the local community that the students and teachers live in (NEEF, 2020). This cultivates a sense of community pride and critical knowledge students can apply as they grow in the environment that they learn about.

Beginnings

The idea of incorporating nature into an education system is not a new one. The earliest influence on the consideration of the environment in education comes from Jean-Jacques Rousseau's novel, *Emile* (1762). Rosseau uses a novel to describe the ideal way a man should be educated. Throughout the book, man's connection with the natural world and human development is integral to proper education. Rosseau's writing made a huge impact on the

western world because he was contributing during the Enlightenment, a time when education, the pursuit of knowledge, was at peak popularity. This started a conversation that continues on to this day.

While Rosseau promoted a completely natural way of learning, with very little interruption from external forces, another philosopher, John Dewey did not fully agree. Dewey, in, *A Need for a Philosophy of Education* (1934), referenced Rosseau's writings and instead posited that while there should be elements of what Rosseau was arguing, more is necessary for a full education. If, as Rosseau thought, a man's education is like the growth of a seed, then it is not technically left on its own to develop (Emile, 1762). There are external conditions that must act upon the seed to help it grow. This, Dewey argues, is where the balance of education should lie, a combination of the natural with structured assistance. He discusses the role of educators, specific materials, and the needs of individual students as part of the necessary structured side of education.

Another example of this kind of education is called skogsmulle, which is a Swedish word that roughly translates to "forest mule." Skogsmulle is the mascot and name used for the pedagogy developed by Gösta Frohm (Friluftsfrämjandet, 2020). Frohm worked at Friluftsfrämjandet, the Swedish Association for Promotion of Outdoor Life, in the 1950's. However, the association was started in 1892 and began only with the promotion of skiing before expanding into outdoor activities for year-round weather. The skogsmulle pedagogy consists of characters who satisfy children's natural curiosity and develop responsibility through song, dance, fairy tales, and active play. The promotion of knowledge, community, movement, fine and gross motor skills, positive attitudes, values, and consideration for the environment are key

aspects of the pedagogy (Friluftsfrämjandet, 2020). Skogsmulle became popular over the next few decades and to this day has been used to educate over 2 million children.

The Swedish outdoor lifestyle, promoting the belief that humans need nature in order to be happy and healthy is what lead to skogsmulle being created, and the rest of Europe took notice, namely Germany. Beginning in the 1800's Germany created kindergartens, which translates to "children's garden." Most countries have kindergarten today as a part of their public school system; however, it is not the same as what Germany initially intended. These original kindergartens were held in gardens or outdoors and were play-based (Mighty Seeds, 2019). A man named Friedrich Fröbel is credited with creating the first kindergarten (Esterl, 2008). Fröbel called it the Play and Activity Institute before coining the term kindergarten. It was built in 1837 in Bad Blankenburg, Germany. However, over time, the kindergartens began retreating inside and conforming to more traditional educational approaches. After the growth of the skogsmulle pedagogy in the 50's, Germany reclaimed kindergartens and began calling them waldkindergartens (forest kindergartens), which is the name now used in most countries for outdoor based schools catering to ages four through six. In Germany, environmental consciousness is a growing national trend and therefore, waldkindergartens continued to grow as well (Esterl, 2008). The waldkindergarten model is now a fully recognized form of preschool and is state-subsidized (Wolf Fritz et al. 2014). These kindergartens focus on experiencing nature and limits, wholesome learning with all the senses, appreciation of life and ecological connections, connecting to oneself, each other and the greater community, experiencing quiet, and increasing sensibility for the spoken word (p. 4). Many of the forest schools in the United States began their institutions by pulling from the practices of the waldkindergartens in Germany.

Theories

When supporters of the nature school endeavors are asked to explain why they believe these institutions are important and where they got their ideologies from, one of the texts most offered in response is Richard Louv's, *Last Child in the Wood* (2006). Louv offers reasons as to why more and more people are considering Millennials, Generation Z, and the newly formed Generation Alpha, to be losing touch with nature. In his first section, Louv coins the term, Nature-Deficit Disorder, stressing that this is not an immediate or official medical diagnosis, but rather a phenomenon that we have witnessed the last few decades. He defines the meaning of the phrase as "describe[ing] the human costs of alienation from nature, among them: diminished use of the senses, attention difficulties, and higher rates of physical and emotional illness" (2006, p. 34). There are many factors, timelines, and situations that combine to define Nature-Deficit Disorder. Louv describes three distinct frontiers of nature in United States history. The first was the traditional, Lewis and Clark frontier, the exploration by colonizers of the Americas and the discoveries they found along the way. It was new terrain for the Europeans to investigate that included land structures, plants, animals, water, and the ways in which the existing human inhabitants interacted with nature. The second frontier comes after colonization set in and people were moving west, cultivating the land, and making farms for themselves. Establishment and the conquering of the land were popular creeds that men were preaching to young boys. This was a time when men like Daniel C. Beard were preaching outdoor pursuits as character builders and founding groups such as The Boy Scouts of America. Americans romanticized nature and living within it during the second frontier.

The third, and current, frontier is described by Louv (2006) as a combination of the urban and suburban with the natural and is also home to the beginnings of Nature-Deficit Disorder. He states that the third frontier is characterized by five trends:

> a severance of the public and private mind from our food's origins; a disappearing line between machines, humans, and other animals; an increased intellectual understanding of our relationship with other animals; the invasion of our cities by wild animals …; and the rise of a new kind of suburban form. (p. 19)

Essentially, Louv finds that with the reduction of family farmers and the increase of consumerism in modern grocery stores, we no longer have personal connections with animals and nature the way we did when families grew their own food in the back yard or slaughtered their own meat in the barn. *Last Child* (2006) maintains that these experiences are often important life lessons about self-sufficiency and the cycle of life, without them we are blissfully ignorant. He finds that with the increasing technological abilities in fields like genetics we're also losing touch with what is considered natural. Today's students can learn about glow in the dark cats and cloned sheep, whereas a decade or two ago plants were plants, animals were animals, and humans were humans. While we may be distancing ourselves physically and maybe culturally from nature, scientifically and academically, we are learning more than ever about nature and its wonders. Louv points to the scientific discovery that animals create actual music and follow some of the same rules of tempo and melody as humans do when making sound to introduce this point. Davy Crockett never got the chance to learn that incredible information. His writing acknowledges that despite the fact that this cannot "substitute for direct contact with nature", it does pique curiosity in today's third-frontier students (Louv, p. 23).

Louv describes how the new suburban world we live in "criminalizes" natural play. He states that the "cumulative impact of overdevelopment, multiplying park rules, well-meaning (and usually necessary) environmental regulations, building regulations, community covenants, and fear of litigation sends a chilling message to our children that their free-range play in

unwelcome…" (2006, p. 31). The rise of associations for neighborhoods imposes rules about where and when children can play outside as well as the rapid and far-reaching construction of these kinds of neighborhoods limits the amount of free space to play in. Louv cites the statistic of North Carolina developed land increasing at twice the rate of the state's population to bring this point home. Natural play areas are being sacrificed at a rate higher than necessary to feed consumerism.

Last Child in the Woods (2006) raises so many important issues about the way millennials and every generation after is growing up. The background and foundation that Louv's research and writing provides are strong evidence for why we need a new form of education. He succinctly summarizes the trends and patterns that society has seen over the past few decades and it supplies the necessary push that some educators needed to start creating nature schools and programs.

Following the publication of *Last Child in the Woods* (2006) others began to contribute towards the growing concern over technology consumption and nature detachment. Another work, *Coyote's Guide to Connecting with Nature* (Young et al., 2010), became widely popular throughout the nature education community. The book is a guide for mentors and teachers to use when facilitating environmental learning. Young and his colleagues reference "invisible schooling" that took place long ago when native people lived off the land. Like learning to speak, with language simply surrounding a human, children would learn best by simply being surrounded by nature. This immersive and organic method is what is the basis of their practice. The guidebook emphasizes routines, habits, and children's passions as teaching tools. Teachers also utilize storytelling, questioning, and music to lead lessons. The authors look for fertile places to begin connecting people to natural history and even include sections on energy, rhythm,

and fostering universal character traits that lead to personal growth all through natural learning. In addition, there is an activity guide that provides applicable and adaptable opportunities for children to learn with primer stories, how-to's, alternatives and extensions. These activities are field-tested and were also a direct response to the No Child Left Behind Act.

Young specifically developed a method of mentoring called Coyote Mentoring that greatly influences the educational ideas put forth in this text. His ideas are inspired by ancient hunter-gatherer cultures that practiced the aforementioned invisible schooling. Young chose a coyote as the guide because it is a natural guide that "entices us off the beaten path, to experiment with creative approaches, to do something different from what's generally being tried" (2008). Coyotes have a true sense of play and abandon that Young wanted to interweave throughout his teachings. The Coyote Guide website (2008) specifically states that there are no textbooks, assignments, or tests used in this instructional method and that their methods are often criticized, seeming as though nothing is actually being accomplished. However, Young and his colleagues maintain that through direct experience and pushing beyond the edges of a student's comfort zone, awareness, and knowledge, they are creating a more open-minded and creative child (2008). *Coyote's Guide to Connecting with Nature* (2010) is certainly one of the more extreme versions of nature education today. There is little to no "school" involved and more spirituality than expected. However, the activities and sentiments can easily be incorporated into any classroom.

A final text that many nature educators find fascinating and informative is Amy Fusselman's *Savage Park: A Meditation on Play Space and Risk for Americans Who Are Nervous, Distracted, and Afraid to Die* (2015). Fusselman's work focuses more on the aspects of fear and risk that both Louv (2006) and Young and his colleagues (2010) mention. While on a

family trip in Japan, Fusselman stumbled upon Hanegi Park where children can participate in adventures such as sawing wood, hammering nails, and building open fires. American-born, Fusselman was shocked to see such dangerous activities taking place in a public park, and her ideas on what "play" really means for children were challenged. Fusselman's writing connects to Louv's observations of the growing urban and suburban environments that American children must navigate today and *Coyote's* (2010) assertion that the education system needs more freedom and adventuring beyond edges.

Today, parents are more concerned about injury or crime, and children are taught that staying indoors or in regulated areas is the way to live a safe life (Louv, 2006). However, children are then less likely to take risks or be creative. In addition, the way Americans approach space needs to be reexamined, specifically, the environments in which individuals live in and how they interpret what it is for. Playgrounds are for play, but arguably, so are construction sites, woods, plowed fields, and office buildings, it all depends on perception. Fusselman's (2015) book speaks more to personal beliefs about the relationships humans should have with work, play, environment, and personal safety rather than the stagnant educational system as Louv and the Coyote authors do (2015). However, her musings are important when explaining the foundational ideas upon which these schools then build their instructional practices.

Approach to Nature Schools in the U.S.

There are sixty forest schools registered as members on the American Forest Kindergarten Association's 9 (AFKA)website from around the nation (2020). The NAAEE currently lists 511 nature preschools in America on their website map. In November 2017, the Natural Start Alliance found a 66 percent increase in the number of registered outdoor schools in just one year. The idea and the schools based around nature education are growing in the U.S.

Most often, these schools are marketed as preschools or early childhood development centers such as the Mill Creek Early Childhood Program (2019) in Batavia, Illinois, the Catalyst Community Preschool (2019) in Santa Paula, California, or the Drumlin Farm Community Preschool (2020) in Lincoln, Massachusetts. While this type of education can be used to teach children up to grade six, most practices are still at the early childhood and preschool level because there are less requirements from a governmental education standpoint. For example, the Indiana Department of Education website has academic standards listed for all subjects for kindergarten through grade twelve yet has no standards listed for preschool or other early childhood learning (IDOE, 2020). When children reach elementary school there are subjects they must be taught, benchmarks they must reach, and, depending on the type of school they are attending, tests they must take. Simply put, it is easier to implement the nature school philosophy at an early childhood level. However, there are a few that provide full elementary school experiences for students such as the Prairie School of DuPage (2019) in Wheaton, Illinois. In general, U.S. practices center around preschool education, but there are those schools that have taken the steps towards expanding the scope of students.

When looking at the distribution of nature school in the United States, there are general patterns that begin to emerge. According to the NAAEE's (2020) website map, there is scarcity through the middle of the country. The plains states, and Nevada, have little to no programs in their areas. New England, the Great Lakes area, and Northwest have the highest density of programs, mostly based in suburbs. This pattern likely appears because those areas of the country are more populated and provide ideal landscapes for nature-based education programs to thrive.

The typical operations at a nature preschool in the United States consists of several programs that are divided into age groups. At Mill Creek Early Childhood Program (2019), the

programs include camp, infants, toddlers, twos, three to fives, preschool, and kindergarten. The Catalyst Community Preschool (2019) divides into classes named after animals, Owl Class (2-3), Hedgehog Class (3+), and Fox Class (4-5). Similarly, at Prairie School of DuPage (2019), there is forest preschool (3-5), forest kindergarten (5-6), elementary (6-12), and middle school (12-14). In most of the early childhood programs, half days are offered as well as full days. Schools customize their other offerings such as camps and adult programs as well, however, most follow this general layout.

These schools tend to follow a Montessori or Reggio/Steiner educational philosophy or credence (NAAEE, 2020). Their websites list constructivist teaching and play-based activities as inspirations for their programs. Many schools begin their days with the Responsive Classroom model of morning meetings, including greetings, sharing, an activity, and a morning message. Social interaction is also a major part of these schools' daily happenings as well as local and community investigations.

Impact on Success

In my inquiries, I have found that there are several key impacts that the supporters of the nature school movement list most often. These attributes have been reported to me by students, parents, teachers, and administrators as well as observed by me. Supporters list the positive impacts from this education as self-sufficiency, independence, problem solving skills, creativity, and patience as just a few of the ones gained from participating in a nature based curriculum. Multiple websites from various schools around the United States and internationally cite authentic learning and application of skills as important outcomes they look to achieve through their programs.

James Sallis, from the Active Living Research Program, has studied children for years for his program to make recreation and community facilities more engaging for people has found through his work that “the best predictor of preschool children’s physical activity is simply being outdoors … and that an indoor, sedentary childhood is linked to mental health problems” (2006, p. 32). Many websites of current running nature schools and outdoor education programs affirm this as well as research from sources like the National Environmental Foundation (NEEF). The first benefit listed is the improvement of academic achievement. This happens through the improved satisfaction of basic needs, the increase of intrinsic motivation, and the increase of positive attitude towards learning. NEEF believes this is because the connection of academic subjects to environmental matters makes content more relevant to students (2020).

The second benefit of environmental education is the encouragement of environmental stewardship. With programs that focus on teaching students to use environment specific technology and approach inquiries with critical thinking skills, students are more likely to take on local environmental issues themselves. The opportunity to apply these skills during real-world experiments instead of workbooks increased student self-efficacy as well. Studies found that programs such as this increased students’ environmental science agency (ESA) and that it had a lasting impact as the skills learned and agency developed were also applied outside of the school setting (NEEF, 2020). This is important now more than ever as the younger generations: Millennials, Generation Z, and Generation Alpha are losing their planet to environmental distress and have been a driving force behind a movement to make Earth healthy again.

The third benefit of environmental education is the deepening of personal development and wellbeing. For decades, nature has been thought to possess restorative effects to the extent of spas being influenced and placed in nature, playlists being made of purely nature sounds, and

nature therapy developing. A connection with nature has shown “improved cognitive, cardiovascular, and immune functioning, reduced crime, aggression, and antisocial behavior, reduced symptoms of ADHD in children, and improved psychological well-being such as mindfulness, meaningfulness, self-actualization, happiness, and vitality” (NEEF, 2020). Rita Berto (2014) found in her research that physical settings can heavily influence the way people cope with stress. She states that exposure to natural environments protects people from the impact of environmental stressors, elicits greater calming responses than urban environments, mediates negative effects of stress, and can aid in recovery of decreased cognitive performance associated with stress. The effects on mental health are extremely relevant for students today as the conversation around mental health is the most productive and pervasive it has ever been. The rise in popularity of social media has increased the occurrences and sharing of mental health disorders exponentially.

The final benefit of environmental education is the enhancement of creativity. In any nature based program students are typically expected to participate in hands on learning where they create projects to solve environmental problems. These projects require students to work collaboratively and design unique solutions as every new problem will have different challenges and parameters (NEEF, 2020). Students take on more active tasks and are encouraged to combine their knowledge of the natural with their knowledge of technology, academic content, and societal limitations and resources. In addition, in the nature preschools and forest kindergartens where play, music, and storytelling are the basis for all activities, creativity and imagination are fostered more than in traditional schools with high academic concerns.

Feasibility

When discussing feasibility, the conversation should address accessibility as well. If the ultimate goal is for this kind of non-traditional education to become the norm, then it would need to have accessibility in all regions, communities, and groups. However, through the readings and observations that I have done thus far, it is obvious that nature schools are suited to a certain demographic and a certain geographic location. One would imagine, that nature schools are easier to come by in rural areas where nature is abundant, however, most are found in suburbs of major cities. For example, in the Northwest corner of Chicago alone, there are 27 nature schools listed on the NAAEE's website as opposed to the 13 others throughout the rest of the state (2019). In addition, there are no mentions of special education programs in their institutions. There are barriers when it comes to the educational resources needed, the natural resources needed, and the accessibility for those with disabilities within these schools. Families who happen to be located either too far into or removed from cities face two distinct barriers. Those that live within major cities such as Chicago or New York do not have the natural resources necessary to run a school like this. The city parks are too commercialized and small to afford any real exploration of nature and transportation farther out into the suburbs may not be economically feasible for all communities, in addition the students are no longer learning locally. Those who live in very rural areas such as central or southern Illinois may not have the educational resources such as supportive environmental centers, readily available educators knowledgeable on this kind of teaching, and proximity to diverse natural landscapes as opposed to farmland. When considering students with disabilities, physical barriers have to be recognized as well as intellectual. Louise Chawla, a professor with degrees in education, child development, and environmental psychology and longtime supporter of the non-traditional nature-based education movement has stated that previous studies never thought to focus on certain

differences between children, so “we don’t know if there is any geographic or class divide, in terms of which kids spend time in nature” (2006, p. 32).

However, some schools and directors that are currently practicing this type of education are having these conversations and experimenting with accessibility. Emma Huvos founded the Riverside Nature School in West Virginia. Her school is located on her family farm and the tuition for families is $400 a month for four days a week, three and a half hours a day (Emma Huvos, 2020). Huvos recognizes the unfairness of this, “it’s become this unique, privileged thing: putting kids outside to play…” (Williams, 2018). She hopes that since her more affluent clientele are putting this kind of education in demand, that it will eventually become a trend that more education programs provide for all students. On the opposite end, schools such as Mundo Verde, a charter elementary school that also places an emphasis on outdoor education, is publicly funded, attendance is free, and enrollment is conducted by open lottery. One-third of students are from low-income families, and 68 percent are students of color (Mundo Verde Bilingual Public Charter School, 2020). The difference is, Riverside is a private school and Mundo Verde is a charter school. While Mundo Verde gets to reach a wider audience, they are subject to more rules and regulations on their instruction, especially in the early years of opening the school. So, the question is, which way is better?

The process of starting a charter school can be done with tons of planning and time, it takes commitment to make it to the end. An article written by Elizabeth Jones on pbs.org details one family’s journey of getting a Mandarin charter school started. The process begins with writing a charter petition. This must include several key items such as hiring practices, the mission, curriculum, and discipline approach. The article states that it took them around six months to complete their several hundred page petition. Next, the petition needs to be submitted

to either a district, county, or city board of education. There is a hearing where those petitioning summarize their ideas, give presentations and answer questions. Then, there is a public forum where the people get to weigh in and ask questions. After that, there is a final hearing and a vote is taken. Stage three as the article calls it is implementation. The family got a federal grant of $325,000 to find a facility, hire teachers, and buy books and supplies. Once the grant dropped off, they utilized fundraising and fund development. The family then had to reach out and educate the public on their new school further to entice potential students and teachers to join them. All of this took more than a year and a half, and the school only opened with two grades their first year, kindergarten and first grade. There were challenges with finding a facility and the school board is run by an assortment of different volunteers. However, every year the school was able to grow in numbers as well as move into a new facility in 2013. In addition, Wynee Sade, one of the founders, felt they did something important and that schools like theirs could begin to show the rest of the country what a different kind of education can do for everyone (Jones, 2014).

Another plausible way of implementing more nature-based schools around the country is to create private schools such as Emma Huvos' Riverside Nature School. Cullinane Law Group, which serves nonprofits and social enterprises, outlines how to create a private school on their website. They suggest by beginning with evaluating and understanding the community the school is being built in and the legal work that needs to be considered. Next, one needs to decide whether the school will be for-profit or nonprofit, the difference being a for-profit can be "operated by a sole proprietor, partnership, limited liability, or a company" (Cullinane, 2012). This option provides that people like Huvos can run her own school with her personal vision coming to fruition. A nonprofit must have a board of directors made up of community members

and parents who run the school. In addition, nonprofits need to apply for status as a tax-exempt organization from the IRS (Cullinane, 2012). The Federal Department of Education does not monitor private schools; however, states do have some regulations and policies in place for private schools to follow. Since this is state by state, Cullinane suggest reading the guides for the state the school is going to be built in, or, the Federal Department's condensed version. There are some common stipulations throughout the 50 states, for example, in Illinois, being accredited through an agency is optional, registration with the Board of Education is optional, there are no requirements for licensing, getting approved or recognized by the Board of Education is optional, teacher certification is optional, and a whole host of other basic school functions such as curriculum, testing, and length of the school year have very little requirements (U.S. Department of Education, 2020). Most of the aforementioned attributes vary as well based on the school's accreditation, registration, or recognition status. All of these need to be applied for through government processing and continuously recorded. The situation is similar state by state. Applying for any of these statuses provides a school with certain benefits and certain restraints. For example, in Texas, being accredited can allow student credits to transfer to other schools, fix teacher salary, provide public acknowledgement, and provide resources from a liaison to ensure quality (Cullinane, 2012). Finally, the school must consider those all too important aspects of school such as curriculum, enrollment, mission statement, income, facilities, and faculty. Much of these processes are the same for the charter schools except for income and faculty as income can come from tuition or other funding and faculty can either have secondary education or not.

To answer the question of which path is better, it comes down to what the educators who advocate for nature-based education want for their programs. The point of nature based education is to shake up the current system in place in the United States. Traditional education in

public schools has become more and more test focused and result oriented. Teachers are required to follow common core curriculum or educational monopoly Pearson instead of creating their own flow of lessons. Students as young as third grade are prepared for most of the year to take a standardized test and continue to do so until high school. Class sizes in traditional public education are increasing and it is leading to more teachers being burned out as well as funding for things like extracurriculars being cut (Jerkins, 2015). With more students in class, the logistics of outside play or field trips becomes trickier and therefore the experiences are less likely to happen. In order to alleviate these issues, and the ever growing presence of Nature Deficit Disorder in these same students, charter schools that have nature-based missions and curriculum should be put in place. Charter schools are the more feasible option because they still get support and resources from the government, enrollment and attendance is free, and the community is much more involved in the process. In addition, they still get to play with their curriculums, maintain reasonable class sizes, and create the kind of school they want. Sade and her partners (year) were able to create a school based around and for Chinese language and culture, indicating that a school based around and for the education and preservation of nature is possible as well. This is evidenced by schools like Mundo Verde. Those in support of nature-based education want to see a change overall in the education system, not just for the few who are privileged enough to afford specified schools and programs. The best way to provide this level of opportunity is to use charter schools.

Exploration into nature education could begin a new generation of students who are focused more on application of skills than recitation of information. Systems in place need a reboot every once in a while, and since acts like No Child Left Behind (NCLB), the current traditional school system has produced more pressure on testing and funding than students'

preparedness for the future. In addition, NCLB demands a high cost on students' socioemotional well-being (Candelaria & Whitney, 2017). Nature education provides an opportunity for America to change these facts. Nature education allows children to reacquaint themselves with the natural world, spend less time with screens, improve creativity, experience restorativeness, and build an awareness of environmental conservation. The options for creating and spreading these schools are attainable and can be built to include a variety of students, not just affluent and able-bodied students. Educators, parents, students, and politicians should all be considering this form of education as a new frontier to develop and take advantage of, there is no limit to whom research like this could positively impact.

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